

What is claimed is:

1. An image reading apparatus comprising:

an image reading portion for reading an image on an original for each pixel; and

a pixel interpolation portion for compensating for pixel data corresponding to a defective pixel in said image reading portion through interpolation with interpolation data, said pixel interpolation portion comprising:

a degree-of-correlation detecting portion for detecting the degree of correlation of a plurality of pixel data situated in the vicinity of the defective pixel;

a filter-size selecting portion for selecting a filter size according to a result of detection provided by said degree-of-correlation detecting portion; and

an interpolation-data computing portion for computing the interpolation data by performing a filtering operation on a plurality of pixel data situated in the vicinity of the defective pixel according to the filter size selected by said filter-size selecting portion.

2. An image reading apparatus according to claim 1, wherein said image reading portion is composed of a plurality of image sensors arranged in a row at predetermined intervals, and said defective pixel is a pixel corresponding to a space between adjacent image sensors.

3. An image reading apparatus according to claim 1, wherein said interpolation-data computing portion includes a plurality of filters having respective different filter sizes.

4. An image reading apparatus according to claim 1, wherein said filter size is based on the number of pixels that said interpolation-data computing portion makes reference to when computing the interpolation data.

5. An image reading apparatus according to claim 1, wherein said degree-of-correlation detecting portion detects the degree of correlation of a plurality of pixel data situated on each of both sides of the defective pixel.

6. An image reading apparatus according to claim 5, wherein said degree-of-correlation detecting portion computes a maximum value and a minimum value of the plurality of pixel data situated on each of both sides of the defective pixel, and determines that the degree of correlation is high, if a difference between the maximum value and the minimum value is not greater than a predetermined threshold value.

7. An image reading apparatus according to claim 5, wherein said degree-of-correlation detecting portion detects the degree of correlation of the plurality of pixel data situated on each of both sides of the defective pixel and the degree of correlation of a plurality of pixel data situated on

both sides of the defective pixel.

8. A data interpolation method for an image reading apparatus having an image reading portion for reading an image on an original for each pixel and arranged to compensate for pixel data corresponding to a defective pixel in said image reading portion through interpolation with interpolation data, said data interpolation method comprising:

detecting the degree of correlation of a plurality of pixel data situated in the vicinity of the defective pixel;

selecting a filter size according to a result of detection of the degree of correlation; and

computing the interpolation data by performing a filtering operation on a plurality of pixel data situated in the vicinity of the defective pixel according to the filter size selected.

9. A control program for executing a data interpolation method for an image reading apparatus having an image reading portion for reading an image on an original for each pixel and arranged to compensate for pixel data corresponding to a defective pixel in said image reading portion through interpolation with interpolation data, said control program comprising:

a step of detecting the degree of correlation of a plurality of pixel data situated in the vicinity of the defective pixel;

a step of selecting a filter size according to a result of detection of the degree of correlation; and

a step of computing the interpolation data by performing a filtering operation on a plurality of pixel data situated in the vicinity of the defective pixel according to the filter size selected.